

From: [Chris Hill](#)
To: [Michael Overbay/R6/USEPA/US@EPA](#)
Subject: RE: EPA HF Study - EPA Stakeholder Meeting Minutes (8/26/2011)
Date: 08/31/2011 09:18 AM

Thanks Mike.

From: Overbay.Michael@epamail.epa.gov [mailto:Overbay.Michael@epamail.epa.gov]
Sent: Wednesday, August 31, 2011 9:10 AM
To: Chris Hill
Cc: Bert Smith; Cassi Vann; 'Quina, Chris'; Debby McElreath; Fonda Manwell; 'Florentino, Gene'; 'Lukert, George'; John Satterfield; Mike Brownell; Nancy Coleman; Puls.Robert@epamail.epa.gov; Mravik.Susan@epamail.epa.gov
Subject: RE: EPA HF Study - EPA Stakeholder Meeting Minutes (8/26/2011)

Thanks Chris for the regs. For convenience, I have pulled the section on monitoring wells out and **bolded** the interesting parts. Here it is:

L. Drilling of Monitoring Wells

1. Monitoring wells shall be constructed in accordance with the pertinent provisions of this Chapter in order to protect freshwater aquifers from surface contamination and to prevent movement of water of objectionable quality from one aquifer to another.
2. To prevent the introduction of extraneous compounds into the formation water, **the use of drilling mud in the monitoring wells is discouraged.**
3. Monitoring wells shall be cased and the casing shall be strong enough to resist the forces imposed during and after installation, including reaction upon the casing by natural or foreign constituents or contamination.
4. The **entire annular space of the monitoring wells shall be sealed with cement-bentonite slurry**, unless specified otherwise by the Department of Environmental Quality (DEQ). Prior to cementing, flushing of the annular space with water will be necessary when obstructions are present or suspected. **Coarse ground bentonite or bentonite pellets shall be placed between and the sand pack and the cement-bentonite slurry. The ground surface around the well shall be covered with a concrete slab at least 4 inches thick, extending at least 2 1/2 feet from the well in all directions. The surface of the slab shall be sloped to drain away from the well.**
5. Monitoring wells shall be covered with a protective cover or cap.
6. Abandoned monitoring wells shall be plugged in accordance with requirements of §531.

Note: Construction of Monitoring Wells for facilities regulated by the department of Environmental Quality (DEQ) require approval from DEQ prior to construction.

It looks like Louisiana regs would require a 5' well pad. That seems odd to me, as I co-managed a base closure site in LA with an LDEQ partner for 10 years and we never used 5' pads, but this is fine, too.

Here is the EPA guidance document that discusses well construction. See Chapter 6, "Monitoring Well Design and Construction."

It was written in 1992 and remains a "draft" document, but I have confirmed with our national Ground Water Forum that is still used today. (History here - I was one of the technical reviewers of the

document back in 1992 when it was produced.) Of course, as guidance, it is not a regulation, so we can have flexibility. For example, many newer monitoring technologies for sampling at multiple levels exist now that were not envisioned 20 years ago.

Mike

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